

## REMARKS/ARGUMENTS

### **Claims Status**

Claims 1-4, 6 and 8 are pending. Claims 1-4 are withdrawn pursuant to a previous Restriction Requirement. Claims 5 and 9-13 were previously canceled without prejudice and claim 7 is currently canceled without prejudice. Claims 6 and 8 remain as previously presented. No new matter has been added.

### **§103(a) Rejections**

Claims 6 and 8 are again rejected under 35 U.S.C. §103(a) as obvious in view of the combination of *Ida* (US 4,839,125) and *Nishi* (JP 06-278148). Applicants respectfully traverse this rejection.

The claimed invention is drawn toward a method of producing a plate polymer comprising feeding a polymerizable raw material containing methyl methacrylate into a belt type continuous plate manufacturing apparatus comprising specific components oriented in a specific manner such that specific formulas are satisfied (i.e., formulas (1) and (2)) (see claim 6 for specifics).

In light of the previous rejection over *Ida* and *Nishi*, Applicants argued that

“the positioning and directioning of [the laser emitter] *Nishi* can not be successfully applied to the claimed invention due to the claimed invention using “two endless belts configured such that their facing belt surfaces run toward the same direction ... and continuous gaskets running under condition of being sandwiched by belt surfaces at their both side edge portions” (see claim 6). This is better understood upon review of Figure 4 of the current specification.

Figure 4 shows positions A1 and A2 wherein these positions are gasket reaching positions in which the polymerizable raw material first reaches the gaskets. The area near the positions A1 and A2 are surrounded by the lower endless belt 1', upper main pulley 2 and the gaskets 7. Therefore, the positioning of the emitter and detector as shown in *Nishi* can not be applied successfully to the claimed apparatus as shown in Figure 4.

In contrast to *Nishi*, in the claimed invention the laser beam emitter is provided on the side of the raw material feeding part and laser ray is emitted from the laser beam emitter along the belt running direction. Furthermore, the

reflection light vertical to the belt running direction can be easily confirmed (visually) by an operator situated at the side surface of the apparatus. In addition, movement of the positions A1 and A2 can be monitored with improved precision. As Nishi does not deal with a two-belt system as claimed, the positioning and directioning of Nishi neither discloses nor suggests such easy visual confirmation or improved monitoring precision of the positions movement as obtained by the claimed invention. Accordingly, *Nishi* does not disclose or suggest the claimed invention.” (emphasis added)

In response to these arguments, the Office currently asserts that “Nishi is relied upon to show that laser detection is known in the continuous belt molding art. Correct placement of the emitter and detector would be determined on a case specific basis. Further, it has been held that rearrangement of parts is within routine skill of one in the art (MPEP 2144.04).” (Office Action, page 5).

First, with respect to the Office’s assertion that “it has been held that rearrangement of parts is within routine skill of one in the art (MPEP 2144.04),” Applicants point out the full text of this section of the MPEP:

“C. Rearrangement of Parts

*In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.); *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). However, “The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.” *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).” (emphasis added)

Accordingly, Applicants submit that the Office’s blanket assertion that it is within routine skill of one in the art to rearrange parts is not applicable to the instant invention because unlike *In re Japikse*, shifting of the position of the parts (i.e., the emitter) would modify the operation of the device, and unlike *In re Kuhle*, shifting of the position of the parts (i.e., the emitter) is not merely a design choice but instead is a choice necessitated by

the need for a functioning device. Furthermore and in line with *Ex parte Chicago Rawhide Mfg. Co.*, Applicants submit that the mere fact that a person could rearrange the parts of the cited art in order to meet the claimed limitations, does not, by itself support a finding of obviousness. In addition, it is noted that neither *Nishi* nor *Ida* “provide a motivation or reason for the worker in the art, without the benefit of appellant’s specification, to make the necessary changes in the reference device.” Accordingly, the “rearrangement of parts” as stated by the Office is not obvious when one considers the true application of MPEP 2144.04VIC. As such, the Office has failed to meet its burden with respect to putting forth a *prima facie* case of obviousness.

Even if the Office had put forth a *prima facie* case of obviousness based on MPEP 2144.04VIC, or any other section of the MPEP, or any pertinent section of the law, Applicants submit that the claimed invention remains non-obvious in light of the cited references for at least the following reasons.

With respect to the Office’s characterization of the *Nishi* reference as being related to “the continuous belt molding art,” Applicants note that the better characterization of the *Nishi* reference is that it relates to the one-belt, continuous-belt molding art. In contrast, the claimed invention relates to a two-belt system which has its own unique challenges that are not present in a one-belt system. For example, and as touched upon in the previously filed remarks, a one-belt system like that of *Nishi* provides the laser beam device above and near the inspection object and such positioning is possible because there is no upper conveyor belt posing a problem.

More specifically, *Nishi* uses a laser beam device for measuring the forming height of the foam being produced (see [0020]) and because a laser beam has a rectilinear advancing property, the direction of the reflection light depends on the shape of the inspection object. As shown in Figure 11 of *Nishi*, a lower conveyor belt (1) is used but an upper conveyor belt

is not. Consequently, the positioning of the laser beam device above and near the inspection object is possible and the direction of the reflection light can be easily predicted and, as a result, the emitter and detector are placed near each other.

Such ease of placement of the laser beam device as described above with respect to *Nishi's* one-belt system does not exist in Applicants' two-belt system. The apparatus of the claimed invention comprises two endless belts and continuous gaskets, the area near the positions  $A_1$  and  $A_2$  is surrounded by the belts and gaskets, and the space between the upper and lower belts is narrow. Consequently, the positions  $A_1$  and  $A_2$  are substantially invisible, thus making it difficult to set a laser beam device near the positions  $A_1$  and  $A_2$ .

In light of such difficulties of placing the laser beam device in the claimed two-belt system, Applicants have discovered that placement of the laser beam emitter on the side of the raw material feeding part is successful for at least the following reasons, all of which are neither disclosed or even suggested by the cited references. The laser ray from the laser beam emitter along the belt running direction reflects at the gas-liquid interface between the raw material and the air. Consequently, the reflection light orthogonally crosses the belt running direction and is detected via the gasket to confirm the positions  $A_1$  and  $A_2$ . Accordingly, based on the knowledge of the positions  $A_1$  and  $A_2$ , an operator can immediately grasp an irregular feeding of the raw material with extremely good precision. Neither *Nishi* nor *Ida* disclose or suggest such a placement for the laser beam device, such a determination of the direction of the reflection light, and/or a way in which to allow an operator to rectify a problem with such good precision.

Furthermore, even if one skilled in the art were to arbitrarily combine the disclosure of *Nishi* (one-belt system) with the disclosure of *Ida* (two-belt system), he/she would still not readily attain the claimed invention because he/she would still find it difficult to confirm the

positions A<sub>1</sub> and A<sub>2</sub> because of their virtually invisible nature and the lack of accurate prediction techniques for the direction of the reflection light in such a system.

Lastly, Applicants submit that *Nishi* and *Ida* are, in reality, non-combinable for at least the following reasons. *Nishi* uses a laser beam device for measuring the forming height of a flexible polyurethane foam. *Ida* uses upper and lower belts wherein the thickness of the plate is determined by the distance between the belts. *Ida* also uses gaskets at both side edges of the belts wherein the distance between the gaskets determines the width of the plate. Thus, in the process of *Ida* it is unnecessary to measure the thickness/height and width of the plate during the polymerization process. Accordingly, one skilled in the art would not consider applying the measurement technique of *Nishi* to the process of *Ida* because such measurements are considered unnecessary in *Ida*.

In view of the foregoing, as well as the remarks previously filed, Applicants again submit that the combination of *Ida* and *Nishi* does not render obvious the claimed invention. As such, Applicants request withdrawal of this rejection.

## Conclusion

Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and restriction requirement, and passage of this case to issue.

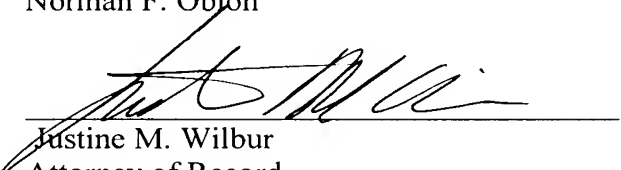
Respectfully submitted,

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